Choosing a method for subtraction
Sheet 3

Which method will be most efficient: 'Frog' or column subtraction...?

1. 7803 – 5420

2. 5674 – 2715

3. 7124 – 5463

4. 8009 – 3475

5. 9874 – 3250

6. 5237 – 4301

7. 7025 – 6967

8. 8150 – 6344

9. 6000 – 4372

10. 50,000 – 47,895

11. 48,948 – 23,413

12. 40,002 – 39,789

Subtracting pairs of 4-digit numbers
Sheet 1

Will you count up (Frog) or use column subtraction? You choose…

1. 3458 - 1275 =

2. 9215 - 5853 =

3. 4569 - 2625 =

4. 5813 - 2368 =

5. 5890 - 4575 =

6. 6238 - 3645 =

7. 7572 - 3647 =

8. 7421 - 5489 =

Challenge

Predict what you will have left if you subtract 1234 repeatedly from 10,000. You may want to use frog to do the first subtraction.

Subtracting pairs of 5-digit numbers
Sheet 2

Choose the method of subtraction you use.

1. 75,369 - 35,826 =

2. 83,580 - 26,317 =

3. 64,329 - 32,876 =

4. 72,463 - 48,725 =

5. 50,756 - 38,249 =

6. 76,371 - 24,393 =

7. 62,341 - 46,586 =

8. 83,036 - 34,152 =

LONE SURVIVOR! – 1

Read the journal.

Sir Douglas Mawson is one of several explorers who boldly led expeditions to investigate the harsh, frozen continent of Antarctica. In November 1912, Mawson and two other men, Xavier Mertz and Belgrave Ninnis, left base camp to map the continent to the east. It was to be a fateful journey, with Mawson being the lone survivor of a terrible ordeal. The journal extracts below are based on his experiences.

9–14 December 1912

... and once again we dig the dogs and sledges out of the snow after three long days of sheltering from yet another blizzard. We continue to trek laboriously east, always on the lookout for deep crevasses hidden by thick snow. Mertz, who has gone ahead on skis, locates a snow-covered crevasse. Just as I make it safely across with my sledge, Mertz suddenly cries out in horror. The terrible feeling of dread fills my stomach. I turn around and realise Ninnis, his sledge and six dogs have fallen into the crevasse. We stare into the gaping abyss and can only see one dog, whimpering in pain on a ledge some 150 feet below.

For hours, we call out to Ninnis, unable to accept his inevitable death. We cling to each other for comfort. Finally, Mertz and I take stock of supplies. Ninnis had the most important supplies on his sledge, along with the strongest dogs. This realisation fills us with alarm. We wonder how we will survive the 315 miles back to base camp with only 10 days' rations and none for the remaining dogs ...

15–30 December 1912

... fashion a tent out of a spare tent cover and drape it over skis to provide some shelter ... are forced to feed the dogs worn-out fur boots, mitts and rawhide straps ... focus on our goal of making it back to base camp, with hunger and bone-chilling cold trying to crush our spirit ... begin to kill the dogs one by one to feed the others and ourselves ...
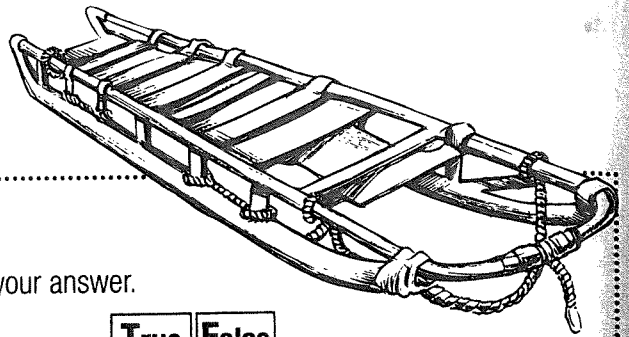
1–8 January 1913

... still some 140 miles to go and poor Mertz is extremely weak and has acute stomach pains of which I am suffering from less intensely. Both of us have severe frostbite. With what little strength I can gather, I haul Mertz by sledge to within 100 miles of base camp. He becomes delirious ... put him in his sleeping bag and hold him down while he raves on and writhes in agony ... finally he quietens and dies peacefully in the morning ... I am left alone to continue the journey ... I lie in my bag with my spirits low and wonder how I can survive with little food and my toes, fingers and skin turning black with frostbite ...

9 January–8 February 1913

... despite my suffering I manage to continue... I feel the presence of a spirit helping me, especially when I find myself dangling in a crevasse by my harness. It would be easier to let go and not get out ... I saw my sledge in half and keep dragging my crippled body onwards ... finally, a welcome vision greets me. I have stumbled into base camp and stare into six disbelieving pairs of eyes—my colleagues who have stayed behind to continue the search ...

LONE SURVIVOR! – 2

Use the text on page 27 to answer the questions.

❶ Literal

(a) Tick true or false and write a phrase or sentence to prove your answer.

(i) The three explorers had experienced several blizzards.　[True] [False]

_____

(ii) Mawson and Mertz were left without a tent after Ninnis's fall.　[True] [False]

_____

(iii) The dogs help Mawson to haul the sledge carrying Mertz.　[True] [False]

_____

❷ Inferential

(a) Why do you think Mawson sawed his sledge in half? _____

_____

(b) Write a synonym from the text for each word below and list the number of the journal paragraph it is found in the brackets.

(i) extreme _____ (　) 　(ii) tosses _____ (　)

(iii) arduously _____ (　) 　(iv) certain _____ (　)

(v) moaning _____ (　) 　(vi) company _____ (　)

(c) Mawson and Mertz were forced to make do when their necessary supplies fell into the crevasse. Scan the 15–30 December entry to describe three examples.

❸ Applied

(a) Convert these distances in the journal from miles and feet to the nearest kilometre or metre.

(1 mile =1.6 kilometres, 1 foot = 0.3 metres)
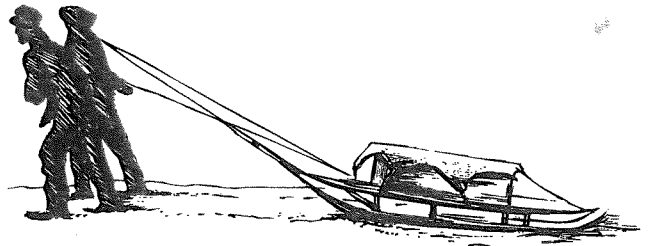
(i) 100 miles = _____ km

(ii) 140 miles = _____ km

(iii) 315 miles = _____ km

(iv) 150 feet = _____ m

(b) Describe how you think Mawson could have escaped from the crevasse he fell into.

_____

_____

_____

_____

_____

LONE SURVIVOR! – 3

Use the text on page 27 to complete the activity.

1 (a) With a partner, scan the text to find and describe an incident which caused Mawson to experience each emotion listed below. Add an emotion of your own choice in the blank box.

   (b) Compare your answers with other pairs of students in your class.

Emotion	Incident	Emotion	Incident
Panic		Despair	
Hope		Pain	
Loneliness			

2 Add more words and phrases to the list below to describe some qualities Mawson possessed that helped him to survive. Discuss and compare with others in your class and list any more you think would be relevant.

brave, thoughtful,

3 Imagine you are Mawson and have just stumbled into base camp, where your colleagues are staring in disbelief. Write your next journal entry.

8 February 1913 –

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